

IN THE CLAIMS:

500c<sup>2</sup> > 1. (Currently Amended) ~~Device~~ A device enabling different spreading factors whilst  
b3 while preserving a common scrambling code, in particular for transmission in a code division  
multiple access cellular mobile radio system, the device including comprising, on transmission,  
scrambling means for applying a scrambling code of length  $Q_{MAX}$  which is a multiple of said  
different spreading factors, to blocks of  $Q_{MAX}$  basic symbols obtained by spreading by means of  
any of said spreading factors.

2. (Currently Amended) ~~Device~~ The device according to claim 1, including, on  
transmission, for spreading K incoming sequences by means of K respective spreading codes of  
respective length  $Q_k$  ( $k=1, \dots, K$ ) which is a sub-multiple of a maximum length  $Q_{MAX}$ , and  
scrambling the spread sequences obtained in this way:


- means for grouping the various data symbols of the kth incoming sequence ( $k=1, \dots, K$ ) into different blocks of  $Q_{MAX}/Q_k$  symbols,
- means for spreading the different blocks from the kth incoming sequence ( $k=1, \dots, K$ ) by means of the corresponding code of length  $Q_k$  to obtain a spread sequence including different spread blocks of length  $Q_{MAX}$ ,
- means for scrambling each of the K spread sequences obtained in this way using a scrambling code of length  $Q_{MAX}$ .

3. (Currently Amended) ~~Device~~ A device enabling different spreading factors whilst while preserving a common scrambling code, in particular for transmission in a code division multiple access cellular mobile radio system, the device ~~including~~ comprising, on reception, descrambling means for applying a scrambling code of length  $Q_{MAX}$  which is a multiple of said different spreading factors, to blocks of  $Q_{MAX}$  basic symbols obtained by spreading by means of any of said spreading factors.

4. (Currently Amended) ~~Device~~ The device according to claim 3, including, on reception, for descrambling and despreding an incoming sequence by means of K respective spreading codes of respective length  $Q_k$  ( $k=1, \dots, K$ ) which is a sub-multiple of a maximum length  $Q_{MAX}$ :

- means for descrambling said incoming sequence using a scrambling code of length  $Q_{MAX}$ ,
- means for grouping the basic symbols of the spread and descrambled sequence obtained in this way in different spread blocks of length  $Q_{MAX}$ ,
- means for despreding the spread blocks obtained in this way by means of K respective codes to obtain K despread sequences formed of different blocks of  $Q_{MAX}/Q_k$  symbols ( $k=1, \dots, K$ ).

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Patent Application No. 09/291,748



5. (Previously Amended) A mobile station for a mobile radiocommunication system,  
comprising a device according to claim 1.

6. (Previously Amended) An entity, in particular base transceiver station, for a mobile  
radiocommunication system, comprising a device according to claim 1.

---